VI.3.6A FLASH FLOOD GUIDANCE COMPUTATION SETUP (PROGRAM FFGUID)

This Chapter contains the information for defining parameters in the Flash Flood Guidance computation program (FFGUID), a part of the Flash Flood Guidance System (FFGS).

The SETUP Menu in program FFGUID provides management functions to define, change and display the parametric information needed to compute gridded, area and headwater flash flood guidance. Parameters are entered by an editor (Section VI.3.6A-SETUP-XXXX) or from ASCII files (Section VI.3.6C).

Introduction to Setup and Definition

This section contains a list of the steps to be followed when initializing the FFGUID program. It also contains an explanation of some of the material needed, some items to consider for the steps, some explanation of what the programs do with the information and references to other parts of this manual that contain further explanations or information.

A summary of the setup steps and their recommended sequence follows:

1. Determine the number of flash flood areas (generally one for each forecast basin).

2. Determine the number of zones/counties in the RFC service area. Boundaries for these zones/counties are used to locate all the bins in the zones/counties for which gridded guidance will be computed.

3. Size the preprocessor parametric database for data type codes FFG and BASN to include the numbers from steps 1 and 2, respectively - NWSRFS PPINIT - I.5-FILESIZE-PPP.

4. Add FFG Operation to segment definitions - NWSRFS FCINIT, VI.3.4B-SEGDEF.

5. Complete the USER CONTROLS & OPTIONS MENU, a sub-menu selected from the FFG Computations Setup Menu. The RFC southwest HRAP corner must be completed before any gridded threshold runoffs are defined - FFGS FFGUID, VI.3.6A-SETUP-USER.

For Zone/county Flash Flood Guidance:

6. Define boundaries for desired areas (counties, zones, etc.) where flash flood guidance (based on gridded guidance) is desired - NWSRFS PPINIT, VI.3.3B-DEFINE-BASIN.

7. Define Areas (counties, zones, urban) AFFG parameters - FFGS FFGUID, VI.3.6A-SETUP-AREA, VI.3.6C-INFILE-AREA.

For Gridded Flash Flood Guidance:

8. (Optional) - Define high flow adjust, intensity and overbank factors by MAP basin boundaries to adjust gridded threshold runoff values - FFGS FFGUID, VI.3.6A-SETUP-GRIDPM, VI.3.6C-INFILE-GRIDPM.

9. (Initial gridded implementation) - Assign zone/county threshold runoff values to grids within the zone/county - FFGS ZGRID, VI.3.6E.

10. Define gridded threshold runoff values using output files from Threshold Runoff program or initially step 9 - FFGS FFGUID, VI.3.6A-SETUP-GRID, VI.3.6C-INFILE-GRID.

For Headwaters:

11. (Optional) - Define Rating Curves as desired for flow at flood stage for use by headwaters - NWSRFS FCINIT, VI.3.4B-DEF-RC.

12. (Optional) - Define forecast flow time series as external for adjustment of headwater guidance - NWSRFS FCINIT, VI.3.4B-SEGDEF.

13. Define Headwater HFFG parameters - FFGS FFGUID, VI.3.6A-SETUP-HEAD, VI.3.6C-INFILE-HEAD.

This completes setup for computation of all flash flood guidance values. Refer to Section VI.3.6B to setup and define all Flash Flood Guidance Products.